

REMARKS

Claims 1, 3-17, 22 and 24-30 are pending in this application. By this Amendment, claims 1, 5, 7, 13 and 22 are amended. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 13-17 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Page 6, lines 3-5 of the present specification discloses that a ceramic plate 71 is disposed at a bottom of the cavity 20 so that a bottom surface of the cavity 20 is portioned. Additionally, page 7, lines 21-22 disclose that food is loaded on the upper surface of the ceramic plate 71. Therefore, the specification adequately supports a plate disposed at a bottom of the cavity, and food is placed on the plate, as recited in independent claim 13. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 1, 3, 6, 11-3 and 16 under 35 U.S.C. §102(b) by newly-cited U.S. Patent 5,525,782 to Yoneno et al. (hereafter Yoneno). The Office Action also rejects claims 4-5, 7-8, 10, 14-15 and 22-30 under 35 U.S.C. §103(a) over Yoneno in view of CN 1230663 to Lee. Still further, the Office Action rejects claims 9 and 17 under 35 U.S.C. §103(a) over Yoneno in view of CN 1085321 to Frimmel. The rejection is respectfully traversed with respect to the pending claims.

Independent claim 1 recites a cavity that accommodates food therein, an electric component chamber disposed at a predetermined portion of the cavity for accommodating a plurality of electric components for radiation of microwave, a suction hole formed at one sided portion of the cavity such that the cavity communicates with the electric component chamber,

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an exhaust hole formed at the other sided portion of the cavity, through which air sucked through the suction hole is exhausted, an exhaust guide covering an outer wall of the cavity where the exhaust hole is formed, that guides air exhausted through the exhaust hole to an outside of the microwave oven, and a back plate having an exhaust passage hole communicating with one end of the exhaust guide, through which air is exhausted, wherein at least one of the suction hole and the exhaust hole is formed at an interval portion between a bottom plate of the cavity and a plate on which the food is loaded, and the air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate by a fan for cooling the electric components.

The applied references do not teach or suggest all the features of independent claim 1. More specifically, Yoneno's FIG. 14 discloses a microwave oven that includes a steam generator 40 for generating steam, a heater 42 for heating steam generated by the steam generator 40, a conveying means (fan) 41 for circulating air contained the steam through circulation path, and valves 45 and 47 that are opened/closed for introducing or discharging air into or from the circulation path. Therefore, the air is introduced into the oven cavity 2 by the conveying means (fan) 41. See Yoneno's col. 14, line 54-col. 16, line 4.

Independent claim 1 recites that at least one of the suction hole and the exhaust hole is formed in an interval portion between a bottom plate of the cavity and a plate on which the food is loaded, and air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate, by a fan for cooling the electric components.

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Yoneno does not teach or suggest that the fan 41 cools electric components in an electric chamber because the conveying means (fan) 41 circulates the air containing the steam, and the air-flow by the fan 41 is not used for cooling electric components. Yoneno's FIG. 14 also shows a cooling fan 57. As shown in FIG. 21, the air is circulated in the cavity 2 because the steam is used for cooking food into the oven cavity 2.

For at least these reasons, Yoneno does not teach or suggest the air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate by a fan for cooling the electric components, as recited in independent claim 1. The other applied references do not teach or suggest the missing features of independent claim 1. Independent claim 1 therefore defines patentable subject matter.

Independent claim 13 recites a cavity that accommodates foods therein, a plate disposed at a bottom of the cavity, and food is placed on the plate, and a suction hole formed between the plate and the cavity, through which air of an electric component chamber is introduced. Independent claim 13 also recites an exhaust hole through which air introduced through the suction hole is exhausted, an exhaust guide that guides air exhausted through the exhaust hole to an outside of the microwave oven, and a back plate having an exhaust passage hole that exhausts the air guided by the exhaust guide to an outside of the microwave oven. Independent claim 13 also recites that air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate, and the air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate

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by a fan for cooling a plurality of electric components for radiating microwave into the electric chamber.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 13. More specifically, Yoneno does not teach or suggest that air introduced through the suction hole and exhausted through the exhaust hole flows below the food loaded on the plate by a fan for cooling a plurality of electric components for radiating microwave into the electric chamber. The other applied references do not teach or suggest the missing features of independent claim 13. Accordingly, independent claim 13 defines patentable subject matter.

Independent claim 22 also recites that at least one of the at least one suction hole and the at least one exhaust hole is formed in an interval portion between a bottom plate of the cavity and a plate on which the food is loaded, and the air introduced through the suction hole and exhausted through the at least one exhaust hole flows below the food loaded on the plate by a fan for cooling a plurality of electric components for radiating microwave into the electric component chamber.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 22. More specifically, Yoneno (and the other applied references) does not teach or suggest that the air introduced through the suction hole and exhausted through the at least one exhaust hole flows below the food loaded on the plate by a fan for cooling a plurality of electric components for radiating microwave into the electric component chamber. Accordingly, independent claim 22 defines patentable subject matter.

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For at least the reasons set forth above, each of independent claims 1, 13 and 22 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3-17, 22 and 24-30 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
KED & ASSOCIATES, LLP



David C. Oren

Registration No. 38,694

P.O. Box 221200
Chantilly, Virginia 20153-1200
(703) 766-3777 DCO/kah

Date: July 16, 2009

Please direct all correspondence to Customer Number 34610.